

Name                      Awatif Fayeز Al-Khamiss  
Date of birth:            30<sup>th</sup> August 1969  
Nationality:              Kuwaiti  
Current Position        Specialist- Geochemist-Basin Modeller.

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**Education:**

- 2006 M.Sc –Specilized in Geochemistry from Institut Français Du Pétrole –IFP.
  - 2002 Diploma Degree (Geology) from Kuwait University.
  - 1993 B.Sc. (Geology) from Kuwait University.
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**Key qualifications:**

A Specialist Geochemist at KOC with 25 years of experience in Exploration Group. The Head of Geochemistry and Basin Modelling Unit in the Exploration Geological & Geophysical Solutions Team. Conducts regional geochemical and basin model Studies for exploration group and supervising in-house and outsource studies, giving support to field development Assets within KOC. Awatif graduated from Kuwait University with B.Sc. degree in Geology (1993) and diploma degree (2002) in geology, as well as a M.Sc. (2005) in geochemistry and Basin Modeling from IFP. Some of the important projects she contributed to include geological and reservoir review of Dorra Gas field, Kuwait Regional Basin Model and Compositional Model in Northern Kuwait, Yet To Find assessment of the resource in total Petroleum system of Kuwait ,PFA studies ,and Basin Model of the Kuwait offshore Project.

**Professional Experience:**

- 2007-2021: Head of Geochemistry and Basin Modelling unit, palned, supervise and conducte the regional geochemical study at exploration. In addetion give suport to field development.
- 2020 Involove in Integrated study of Play Fairway Analysis of Hith & Gotnia Formations, evaluation of source rock potention and fluid characteristics.

- 2020 Involve in Integrated study of Play Fairway Assessment of Triassic Section Jilh , Minjure and Sudair Formations, evaluation of source rock potential and fluid characteristics and Basin Model.
- 2020 Involve in Integrated study of Petroleum System Assessment of Mid. Cretaceous Reservoirs (Mauddud, Burgan & Wara Fms).
- 2019 Supervise the Basin Model of the Kuwait Offshore Study.
- 2019 Give support to unconventional committee evaluating the Jurassic unconventional reservoirs study.
- 2019 Involve in Hith and Gotnia Characterization and correlation of Bulk Properties and Biomarkers ,Greater Burgan Field.
- 2018 Involve in Integrated study of Geochemical Characterization of Mishrif, Rumail and Tuba Formation Oil Reservoirs West Kuwait.
- 2017 Involve in Petroleum system assessment of Upper & Lower Marrat Source Rock & Reservoirs Potential.
- 2016 Involve in Integrated study of Play Fairway Assessment of Najmah Sargelue Formation, Evaluation of Source Rock Potential, Fluid Characteristics and Basin Modeling.
- 2016 Supervise Fluid Inclusion Stratigraphy, Petrography, Microthermometry and FI-GCMS Study of offshore area— for Assessment of Hydrocarbon Charge Potential and Hydrocarbon Plays Phase-III.
- 2016 Supervise Regional Study of H<sub>2</sub>S of Mesozoic and Cenozoic Reservoirs in the Oil Fields of Kuwait.
- 2016 Supervise Mesozoic Petroleum Systems and Play Assessment, Lower Cretaceous Reservoirs.
- 2015 Supervise Fluid Inclusion Stratigraphy, Petrography, Microthermometry and FI-GCMS Study of Thirteen regional Wells for Assessment of Hydrocarbon Charge Potential and Hydrocarbon Plays Phase II.

- 2015 Initiate fluid samples store and database management (oil and water samples).
- 2015 Supervise outsource study of Mesozoic Petroleum System Source Rock Contribution and Charge.
- 2015 Supervise Geochemical Comparison and Allocation of Oils from the Wara, Mauddud, and Upper and Middle Third Burgan Reservoirs from the Burgan, Magwa, and Ahmadi Structures, Greater Burgan Field, using High Resolution Gas Chromatography.
- 2015 Supervise Potential of Implementing POPI Technology for Reservoir Quality Assessment, Wara, Burgan and Mauddud Formation at Burgan Field.
- 2014 Supervise Fluid Inclusion Stratigraphy, Petrography, Microthermometry and FI-GCMS Study of Mutriba Field Assessment of Hydrocarbon Charge Potential and Hydrocarbon Plays Phase I.
- 2013 Involvement in integrated study of Play Assessment of Hith and Gotnia Formation in North Kuwait.
- 2012 Supervise Assessment of H<sub>2</sub>S Risk North Kuwait for Gas Team, Assess the origin of H<sub>2</sub>S in Najmah and Mid Murrat Reservoirs.
- 2012 Supervise compartmentalization study for Najmah and Mid Murrat reservoir as support for Gas Field development.
- 2012 Give support Bahrah Field Project Assessment Cretaceous reservoirs. Geochemistry and Basin Model part.
- 2011 Involvement in Ahmadi gas Leakage Study Evaluating the Gas Chemistry and show their origin and give summer report and presentation to committee.
- 2011 Involvement in team study for the first feasibility study for the Shale Gas in Kuwait, Evaluate the Geochemical and carry out basin model for resource estimation.

- 2011 Initiate and establish geochemistry data based using PIGI Software.
- 2010 Initiate and Supervise Regional Diamondoids Studies Phase-1 and Phase-II, that differentiate between two main source rock Facies Najmah and Makhul, and identify mixing between the two petroleum systems.
- 2010 Complete characteristics of Lower Fars heavy oil as support to Heavy Oil Team.
- 2009 Involve on the first "Compositional Model in Northern Kuwait for prediction of API and GOR Jurassic reservoirs, North Kuwait.
- 2009 Carried out internal study Basin Modeling of "Mutriba area" assessment the Paleozoic resources.
- 2008 Involve in team Integrated studies for release of exploratory locations in Kuwait Bay Project, carried out compositional model for API and GOR prediction.
- 2007 Work in team "yet to be found study" as part to 2030 strategy calculating how much resource left to be discovered in Kuwait using basin model independent inhouse study.
- 2004-2005 Involve and supervise "Kuwait regional Basin Model project" study.
- 2003 Started the Geochemistry Specialization Program with IFP, lead to M.Sc Degree in Geochemistry.
- 2002, Involved in the "Regional Thermal Modelling Study in Kuwait" by Robertson Research Limited. Attended three weeks training mainly on 1D and 2D modelling.
- 2000 Involve on Geological and reservoir review of Dorra Gas field Study. Update, complete the final report and prepare the final presentation.
- Wrote internal report about Regional Pore Pressure in Kuwait.
- 1999, Attended three month workshop by Robertson on "Exploration Team Management" and evaluated Minagish and Wara Formations in South Kuwait.
- 1999 Involve Reassessment of Prospectivity of Najmah/ Sargelu Formation North Kuwait.

- 1998 Involved in the first regional geochemistry study “Regional Geochemical Source Rock and Oil Correlation Study” by Geochem in 1998. Attended three weeks training course, laboratory sample preparation for TOC, GC, GCMS and Ro measurements.
  - 1996 Working as a member of prospect evaluation team, give support for the geological and geochemistry data.
  - 1996 Involved in Shell-KOC offshore Joint Study. data analysis. Carried out independently well pics correlation using Lank Mark software applications.
  - 1995 Wrote technical Note on the Recorded Occurrence of Stylolite in north Kuwait,
  - 1995 worked on mapping and exploration data acquisition.
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#### **Other**

- 2019 Author of Kuwait Geological Book”Chapter- Petroleum System of Kuwait”, Version Two.
  - 2019 Author Traslation of Kuwait Geological Book”Chapter -Petroleum System of Kuwait”, from English to Arabic.
  - 2015 Author of Kuwait Geological Book”Chapter- Petroleum System of Kuwait”, Version One.
  - 2012 Familiarization sessions to geology teachers from Ministry Of Education. Give two sessions, General introduction to Petroleum Geology and Petroleum Geochemistry.
  - 2018 Part of the committee 7C.s mentoring Coaching Booklet.
  - 2010 involve in GCC task force team of Geochemistry.
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## **Conference Participation and Papers presented in Conferences**

- 1.** Triassic Source Rock Potential and its Contribution to Deep Gas Accumulations in Kuwait Deep Gas Exploration and Future Development Workshop 7–9 October 2019 | Abu Dhabi, UAE. Presenting a talk.
  - 2.** A Predictive Model for the H<sub>2</sub>S Distribution in Kuwait ADIPEC 2016 Abu Dhabi, UAE. Presenting a talk.
  - 3.** Source Rock Characteristics, Thermal Maturity and Hydrocarbon generation of Mesozoic Section in Kuwait AAPG “Source Rocks Of The Middle Eats ” GTW 25-27 January 2016 \* Abu Dhabi, UAE. Presenting a talk and chairing a session.
  - 4.** Compositional Basin Model of Kuwait Lead to Yet to Be Found. AAPG Hedberg Conference “Petroleum Systems: Modeling the Past, Planning the Future “October, 2012 Nice France. Poster
  - 5.** Diamondoids application for Petroleum system Assessment AAPG-GTW Beirut 24th January- 2011. Presenting a talk
  - 6.** Prediction of Fluid Compositional Heterogeneities in Accumulations using Local Grid Refinement (LGR): Example from the Jurassic of Northern Kuwait AAPG ALAGO 2009. Poster.
  - 7.** Compositional Basin Model of Kuwait – Leads for Yet To Find Potential EAGE Workshop on Detective Stories Behind Prospect Generation - Challenges and the Way Forward, 2009. Presenting a talk.
  - 8.** Northern Kuwait Compositional Modeling GOR and API Prediction Geo 2008. Presenting a talk.
  - 9.** Thermal Model of Kuwait. 5th Middle East Geosciences Conference, GEO2002. Presenting a talk.
  - 10.** Pseudo-Source Rock Identification – A classic example of Najmah Formation in Kuwait (Extended Abstract) 63rd EAGE conference, 2001. Poster.
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## Membership

- ALAGO “Latin American Association of Organic Geochemistry” 2006-2008.
  - SPE Member.2006-2007.
  - IMOG “International Meeting on Organic Geochemistry” 2001-2002.
  - Was AAPG Member
  - Was Member of EAGE.
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## Publications (Abstracts)

1. Salem AL-Ali, **Awatif Al-Khamiss** and Hussain Akber. Geochemical Risk Assessment of Kuwait Shale Resources, IMOG 2018.
2. Rita Andriany, Hussain Akber, **Awatif Al-Khamiss** and Abdul-Aziz Al-Faris. Success Stories of Reservoirs Geochemistry Application in Kuwait’s Petroleum System IMOG 2018.
3. Diagnosing Production Problems in Highly Deviated Wells Using Oil and Gas Geochemical Fingerprinting Mark A. McCaffrey (Weatherford Laboratories), **Awatif Al-Khamiss** (Kuwait Oil Company), Marc D. Jensen (ConocoPhillips Alaska), David K. Baskin (Weatherford Laboratories), Christopher Laughrey (Weatherford Laboratories), Wade Rodgers (Occidental Petroleum) Paper Number: OTC-27617-MS Published: May 01 2017.
4. Sour Gas Occurrences in Kuwait and the Mitigation Challenge A. Hofmann (SGS), **A. Al-Khamiss**, (KOC), R. Malekzadeh (SGS), W. van Strien, (SGS). Kuwait Oil & gas show and conference, KOGS 2017.
5. Petrophysics and hydrocarbon potential of Paleozoic rocks in Kuwait Fowzia Abdullah , Fouad Shaabanb , Fikry Khalafa , Fatma Bahaman , Bibi Akbar , **Awatif Al-Khamiss** Journal of Asian Earth Sciences, 2017.
6. **A. Al-Khamiss**, KOC; M. Al-Hajeri, KOC ; S.Al-Ali, KOC; A. Hofmann, SGS; C. Rigollet, SGS; P. Nederlof, SGS; J. Ravestein, SGS; R. Malekzadeh, SGS; W. van Strien, SGS, 2016; A Predictive Model for the H<sub>2</sub>S Distribution in Kuwait; ADIPEC 2016, SPE-183312-MS.
7. Riyasat Husain, Ghaida Al-Sahlan and **Awatif Al-Khamis** Hydrocarbon Seals in Kuwait – Variability and Impact on Hydrocarbon Accumulation and Reservoir Compartmentalization. January 2016 Conference: AAPG/EAGE Workshop on "Hydrocarbon Seals of the Middle East" Muscat, Oman.

8. Javad Estarabadi;Ahmad Shoeibi;Gionata Ferroni;Mashari Al-Awadi;**Awatif Al-Khamiss**;Bader Al-Ajmi;Jalal Dashti;Rita Andriany The Application of Well Site Isotopes Analysis for Reservoir Evaluation SPWLA-2016.
9. Hussain Akbar, Rita Andriany, **Awatif Al-Khamiss**: The mysteries of Triple Source Rock in Kuwait IMOG 2015.
10. Rita Andriany, **Awatif Al-Khamiss**, and Mubarak Al-Hajeri The viscous oil of the youngest petroleum system in Kuwait - From Where?: IMOG 2015.
11. **Awatif Al-Khamiss**, Salah AdulMalik, and Waleed Abdel Hameed Compositional Basin Model of Kuwait – Leads for Yet To Find Potential AAPG Hedberg Conference Petroleum System, 2012.
12. George Gega; Abdulaziz Al-Fares; **Awatif Al-Khamis** The Origin and the Prospectivity of Najmah Shale in Kuwait. 2013 AAPG International Conference & Exhibition, Cartagena, Colombia,
13. Husain, Riyasat1; Al-Khamis, Awatif; Hussain, Fida; Prakash, Anand; Rabie, Ahmed; and Al-Fares, Abdulaziz. Tithonian Basal Makhul Shale: A Frontier Shale Resource Play in Kuwait GeoConvention 2014.
14. Salem Al-Ali, **Awatif Al-Khamiss** and Hussain Akbar. Abstract Geochemical Risk Assessment of Kuwait Shale Resources IMOG 20113.
15. Rita Andriany, Hussain Akbar, **Awatif Al-Khamiss** and Abdulaziz, Success Stories of Reservoir Geochemistry Application in Kuwait’s petroleum System Abstract IMOG 2013.
16. Fré´de´ric Monnier, Pierre-Yves Chenet, and Jean-Marie Laigle, **Awatif Al-Khamiss**, Francois Lorant and Sylvie Pegaz-Fiornet. Prediction of Fluid Compositional Heterogeneities in Fields Using Local Grid Refinement: Example from the Jurassic of Northern Kuwait.. Paper AAPG 2012.
17. R. Andriany, **A. Al-Khamiss** and G. Al-Sahlan. From Geochemistry to Stratigraphy: Unraveling the History of Three Oil Machines in Kuwait Fourth EAGE Workshop on Arabian Plate Geology, 2012
18. Andriany, Rita ; **Al Khamiss, Awatif** ; Al-Fares, Abdulaziz ; Akbar, Hussain ; Al-Ali, Salem Geochemical Inversion: A Breakthrough to Determine Cretaceous Petroleum System in Kuwait.GEO-2012.
19. Hossein Alimi, **Awatif Al Khamiss** and Rita Andriany Fingerprinting and Correlation Investigation of Selected Crude Oils from Kuwait Using Results of Compound Specific Isotope Analysis of Biomarkers. Geo2012.



20. **Awatif Al Khamiss**, Rita Andriany, Hussain Akbar and Salem Al-Ali. Molecular Geochemistry Defines Jurassic and Cretaceous Petroleum Systems in Kuwait. Geo2012.
21. Rita Andriany, **Awatif Al-Khamiss**, Hussain Taqi, Abdulaziz Al-Fares. Shines Bright for Jurassic Exploration Targets: case study of shale oil characteristics, IMOOG 2011 Abstract.
22. Rita Andriany<sup>1</sup>; **Awatif Al-Khamiss** An Integrated Approach Involving Biomarker and Isotope Data for Oil to Source Rock Correlation of Najmah and Sargelu Formations, North Kuwait. 9th Middle East Geosciences Conference GEO 2010 GeoArabia, Abstract, v. 16, no. 3, p. 202.
23. R. Andriany and **A. Al-Khamiss** Permo-Triassic Source Rock Assessment by Inherited of the Triassic Oils in Kuwait. Third EAGE Workshop on Arabian Plate Geology, 2011.
24. **Awatif Al-Khamiss**, Salah Abdulmalek, Waleed Abdel Hameed, Compositional Basin Model of Kuwait – Leads for Yet To Find Potential EAGE Workshop 2009.
25. Mohammed Khalid, R. Hussain, **A. Al-Khamiss**, A. Sajer Exploration of Triassic Plays in Mutriba area, West Kuwait, Challenges and way forward. EAGE 2009.
26. Riyasat; Sajer, Abdulaziz; **Al-Khamiss, Awatif**; Iqbal, Mohammed K.; Al-Zeabout, Nadia, Triassic Petroleum System of Kuwait Husain, AAPG 2009.
27. Al-Khamiss, A.F., F. Monnier and P.Y. Chenet 2008. Compositional modeling of northern Kuwait Jurassic hydrocarbons for GOR and API prediction. 8th Middle East Geosciences Conference, GEO 2008. GeoArabia, Abstract, v. 13, no. 1, p. 118.
28. M. Al-Hajeri , P. Y. Chenet , **A. Al-Khamiss** , S. K. Bhattacharya<sup>1</sup> , M. Pernelle , and N. Bianchi. Regional Overpressure Modeling in Onshore Kuwait: Impacts on Pressure Prediction before Drilling and Petroleum System Behaviour. GEO 2008
29. Al-Hajeri, M., **A. Al-Khamiss**, S. Bhattacharya, P.-Y. Chenet, M. Pernelle and N. Bianchi. Regional overpressure modeling in onshore Kuwait: impact on pressure prediction before drilling and petroleum system behavior. 7th Middle East Geosciences Conference, GEO 2006. GeoArabia, Abstract, v. 12, no. 1, p. 137-13.
30. Chenet, P.-Y., N. Bianchi, M. Pernelle, A. Prinzhofer, F. Lorant, S. Bhattacharya, **A. Al-Khamiss** and M. Al-Hajeri 2006. Oil and gas fingerprinting in onshore

- Kuwait: implications for the petroleum system. 7th Middle East Geosciences Conference, GEO 2006.
- 31. Awatif Al-Khamiss**, S. Bhattacharya, M. Al-Hajeri, N. Rao, P.-Y. Chenet, N. Bianchi, M. Pernelle and A. Prinzhofer . Petroleum systems in onshore Kuwait: from Paleozoic deep targets to Cretaceous. 7th Middle East Geosciences Conference, GEO 2006. *GeoArabia*, Abstract, v. 12, no. 1, p. 138-139.
32. Mubarak Al-Hajeri, S. K. Bhattacharya and **Awatif Al-Khamiss**; “Characterization of Najmah Source Potential – a Basic Input for evaluation of Mesozoic Petroleum system in Kuwait,” Presented in AAPG Conference in Barcelona, 2003.
33. **Al Khamiss.A**, S.K.Bhattacharya Patrick Barnard and Allan Collins. Thermal Model of Kuwait. 5th Middle East Geosciences Conference, GEO 2002.
34. **Al Khamiss Awatif**, S.K.Bhattacharya Pseudo-pseudo –source rock identification : A classic Example of Najmah Formation from Kuwait Petroleum province. EAGE 2001.
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### **List of publications**

- 1- Monnier, F., P.-Y. Chenet, J.-M. Laigle, F. Lorant, S. Pegaz-Fiornet, and **A. Al-Khamiss**,(2012) Prediction of fluid Compositional Heterogeneities in Fields using local Grid Refinement: Example from the Jurassic of Northern Kuwait, AAPG Hedberg Series, no. 4, p. 87– 100.
- 2- **A. Al-Khamiss**, M. Al-Hajeri, KOC ; S.Al-Ali,. Hofmann, C. Rigollet, SGS; P. Nederlof, J. Ravestein, R. Malekzadeh, W. van Strien, 2016; A Predictive Model for the H<sub>2</sub>S Distribution in Kuwait; ADIPEC 2016, SPE-183312-MS.

- 3- Mark A. McCaffrey **Awatif Al-Khamiss**, Marc D. Jensen David K. Baskin  
Christopher Laughrey, Wade Rodgers .Diagnosing Production Problems in Highly  
Deviated Wells Using Oil and Gas Geochemical Fingerprinting. Paper  
Number: OTC-27617-MS Published: May 01 2017.